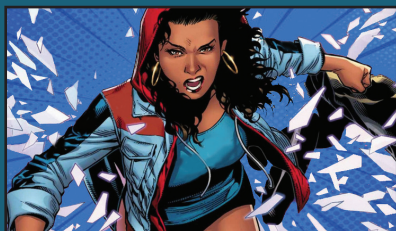


# Design Utah's Energy & Minerals Superhero for STEM FEST



Superheroes continue to flash upon our silver screens, harnessing their unique powers and prowess to save the planet. From bullet blocking shields to soaring suits to lightning speeds and laser eyes, many superheroes use energy and minerals to protect people and make the world a better place.

As a leading state for energy and minerals, Utah is home to a vast array of natural resources - from renewables like solar, wind, hydro and geothermal, to conventionals like oil, gas and coal. In addition, the state boasts a number of strategic minerals used for powering smartphones, defense systems and feeding the hungry.

It's time Utah had a **superhero** of its own!

## Your Mission

To design Utah's new superhero powered by energy and minerals. Whether that's harnessing the strength of the sun or sporting a suit made of carbon fiber, we want you to create Utah's new defender using a variety of energy and mineral resources, strengths and abilities.

### Submit your superhero:

email your superhero submission to  
Kevin Brooks – [kevinbrooks@utah.gov](mailto:kevinbrooks@utah.gov)

**Deadline: October 12, 2018**

## Instructions

- 1 Review the classes** and abilities, as well as the list of Utah's energy and minerals
- 2 Build your character** based on one OR multiple classes and abilities: be creative!
- 3 Name your character** and write a short backstory describing your superhero's origin, skills, equipment, nemesis, and how they will stand up for Utah's future.

Select submissions will receive prizes for "best in class," with the winning submission being recognized as the official energy and minerals superhero for Utah at **STEM Fest 2018, Oct 23-24, 2018 at Mountain America Expo Center!**



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# Pick Your Class

## Transmitter

### Transmission,

Think: "Professor X, Jean Grey"

**Powers:** Transmit energy through the power of thought.

### Sample Abilities:

- Telepathy/Telekinesis
- Mind control
- Precognition

## Generator

### Conventional energy,

Think "Rogue"

**Powers:** The ability to create, regulate, and destroy energy at your will.

### Sample Abilities:

- Ability to siphon, regulate, or absorb energy from others
- Ability to use any form of energy you touch
- Ability to enhance and charge other's abilities

## Elementalist

### Renewable Energy and Mining,

Think: "Storm, Wonder Woman, Magneto"

**Powers:** Harness the power of the elements (Wind, water, earth, sun, and metals).

### Sample Abilities:

- Ability to control the natural elements to create fire, water, and storms
- Ability to create, manipulate, and bend metals and minerals
- Ability to grow vines and plants capable of trapping and ensnaring enemies

## Fabricator

### Petroleum products, carbon fiber, metals, Think "Black Panther, Ant Man"

**Powers:** Utilize your unique natural resources, minerals, and metals known only to your homeland to overpower, outsmart, and outcraft your enemies.

### Abilities:

- Ability to grow large or small
- Invisibility
- Durability/resistance to damage

## Innovator

### Research & Development, Energy Technologies,

Think "Iron Man, The Wasp, Batman"

**Powers:** Apply superior thinking and reasoning skills to develop new ways to use energy and minerals.

### Sample Abilities:

- Superior Intelligence
- Ability to manipulate energy beyond the known realm
- High-powered superhero suit and gadgets

## Transporter

### Alternative transportation and fuels,

Think "The Flash, Mystique"

**Powers:** The ability to harness energy and fuels to perform fast moving attacks.

### Abilities:

- Super speed
- Teleportation
- Shapeshifting



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# Utah's Energy & Minerals Resources

## Energy

**Oil** - fuel used for heating, power generation, gasoline, asphalt for roads; and chemicals, plastics, and synthetic materials utilized in common household products.

**Natural Gas** - fuel used for generating electricity and heat; it's compressed form (CNG) can power vehicles

**Coal** - combustible black rock able to generate electricity 24/7

**Carbon Fiber** - stronger and lighter than steel; ideal for manufacturing technologies used in sporting goods, aerospace, automotive and wind energy industries

**Wind** - generates power when the wind blows

**Solar** - generates power when the sun shines

**Geothermal** - zero-emitting, baseload power derived from the heat of the earth

**Hydroelectricity** - power created from falling water or fast running water

**Biomass** - fuel developed from wood and other organic material



## Strategic Minerals

**Copper** - good conductor of electricity and heat, used in generators, motors, home-heating systems and radio and TV sets.

**Magnesium** - lighter, stronger and stiffer than aluminium, titanium and steel; led to a new generation of lightweight mobility products.

**Beryllium** - structural material for high-speed aircraft, missiles, spacecraft, and communication satellites.

**Gilsonite** - uses in oil and gas well drilling additives, asphalt paving mixes, inks, paints, and coatings.

**Potash** - superior potassium based fertilizer for crops worldwide with abilities to improve crop yield and quality, making plants more resistant to extreme environments, diseases, and insects.

**Salt** - storing compressed air from energy sources in a salt cavern beneath the earth, and using it to produce electricity

**Tungsten** - holds the highest melting point of any metal; used in filaments in incandescent light bulbs; used in alloys, such as steel, for greater strength.

**Sand and Gravel** - used as a base material below roads and homes; aids water filtration, purification and erosion control

# Your Superhero

Name your character:

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What is your character's energy & minerals powers and abilities?

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What is your character's tools, gadgets, or weapons? What are they made of and how do they work?

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Describe your character's costume or suit - what is it made of?

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Who or what is your character defending? What is your character's mission?

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Write their backstory:

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# Draw Your Superhero



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